



**KODAK**  
**REFLEX**  
**SPECIAL** 16mm  
**CAMERA**



Here is the kind of 16mm motion picture camera which our research told us is urgently wanted by professional film-makers. It meets the various needs and specifications of commercial producers and in-plant film departments as well as those of major studios and television stations.

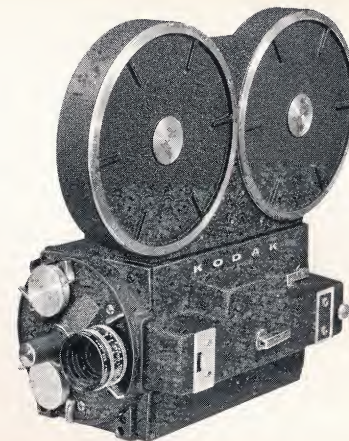
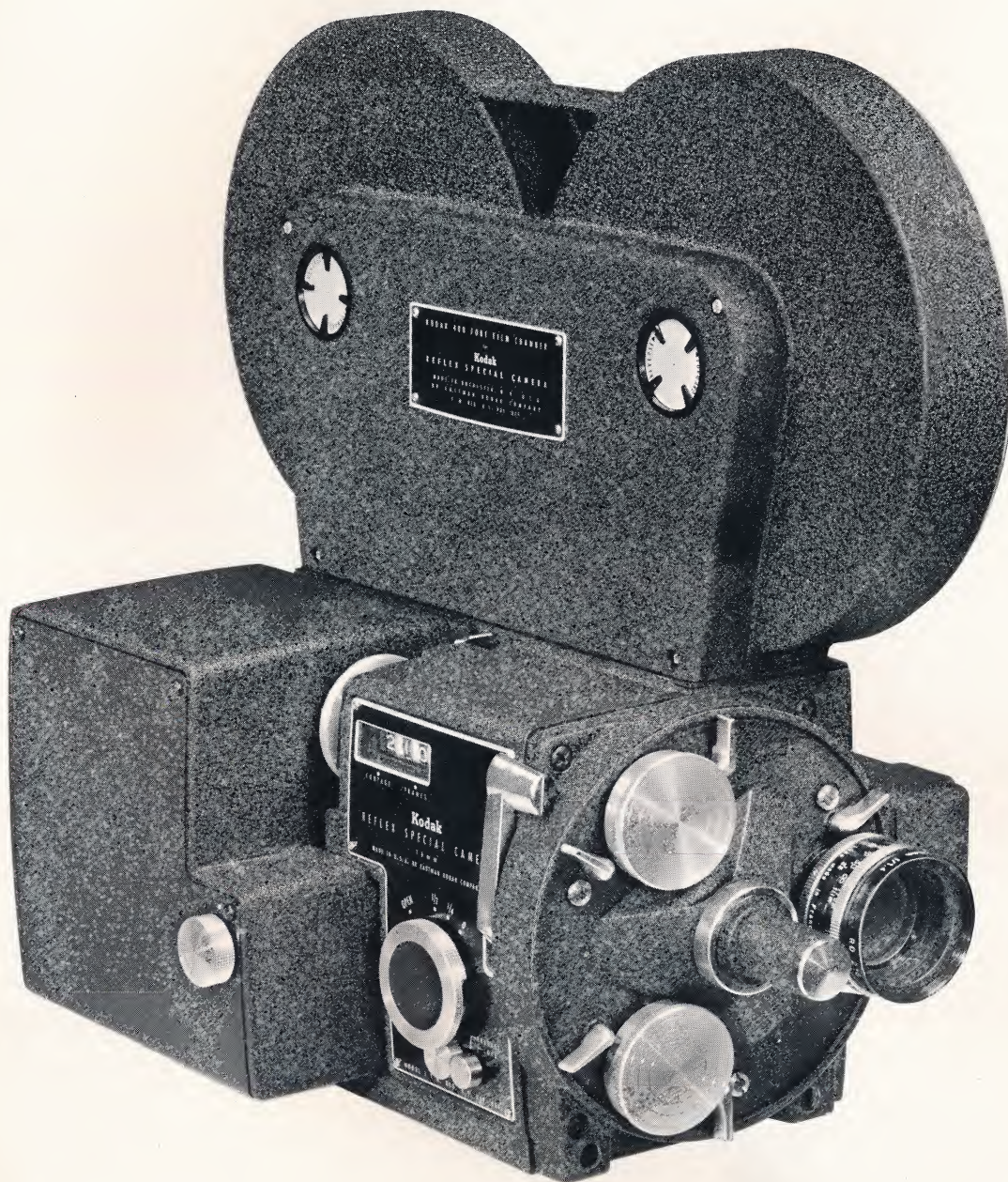
Intensive study and innumerable interviews with users preceded the design and engineering of this camera. Cameramen told us what they wanted—exactly. Maintenance and repairmen told us what they wanted us to avoid. Producers asked for a versatile instrument which would perform superbly as a matter of routine, without temperamental adjustments. Budget men requested minimum cost—for a truly professional camera which can be kept in top condition by the camera operator himself.

In addition to these requirements, many innovations were considered by Kodak's camera engineers. In design, anything that contributed to making the camera watch-like in precision, trucklike in sturdiness, was studied. Anything that did not contribute fully to these objectives failed, naturally, to survive the testing and analysis and re-engineering that went into each of the camera's parts.

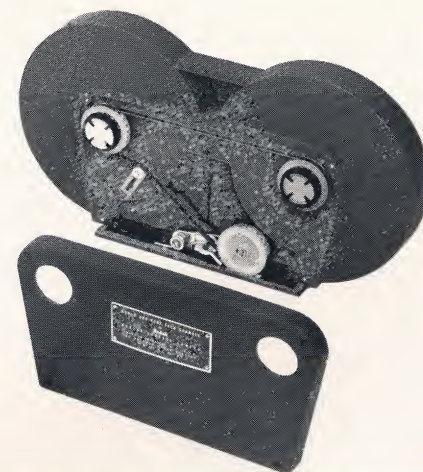
Kodak thus is able to present to the professional 16mm film world a real achievement in motion picture camera design and production — the Kodak Reflex Special Camera, 16mm.

**DESIGNED  
TO MEET  
THE NEEDS  
AND WANTS  
OF  
PROFESSIONALS**





Handsome appearance through functional design characterizes the Kodak Reflex Special Camera. Controls on its right side and front turret are sturdy but simple . . . positive in action, but easy to use. The magnificent reflex viewing system which distinguishes the camera is on the left hand side.



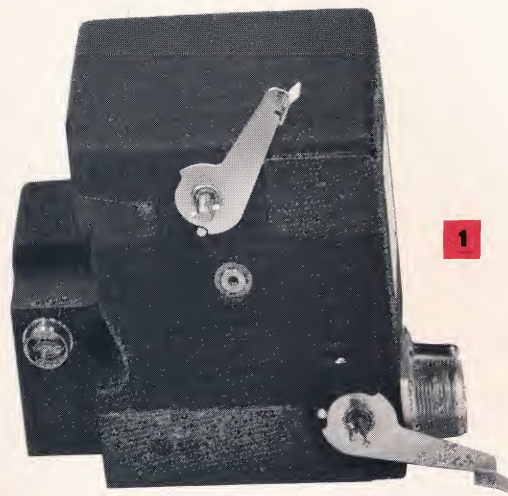
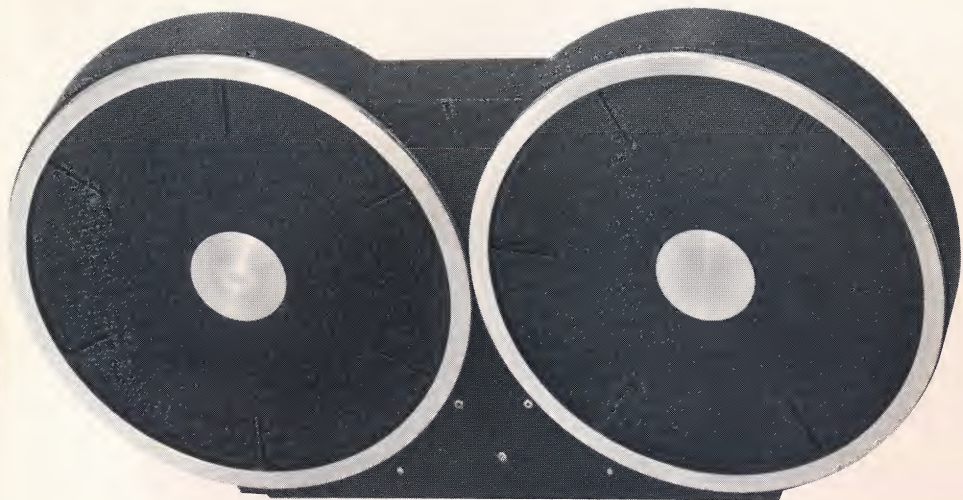
**Film chambers** for the Kodak Reflex Special Camera are gear-driven internally and are reversible. Revolving plates on the axes show when film is moving, and are marked to indicate whether forward or reverse. The 400-foot chamber shown replaces the camera top and is held in place by a locking cam. The chamber's light trap permits enough film to be withdrawn for threading without danger of fogging the load.



Strength of construction is a prime requirement for a professional camera subject to continuous day-after-day operation. The backbone of the Kodak Reflex Special Camera is its solid, die-cast aluminum body. Within this body are the essential parts of the gear train which drives the shutter and pull-down movements. Lubricated for life, the nylon gears are strong, quiet, free from play, and long-lived. **1** Moving parts within the camera are driven by one of three available motors, strong enough to drive the camera and 1200' magazine. The choice of drives consists of a synchronous motor, a variable speed motor with a speed range of 8 to 64 fps, or a motor for single-frame and animation work. Motors are quickly detachable for simple changing. **2** The turret is of unique design, spring-loaded and mounted on ball bearings to maintain constant accuracy. It carries three lens seats incorporating new clamp lens fastenings (Type R mount). Lenses are gripped by the clamps and cannot vibrate loose. Lens changing is fast, simple and accurate. **3** Threading is simple and positive: a single large sprocket controls both loops. The assembly is of the single-sprocket type, permitting use of single-perforated film with or without full-width magnetic sound tracks. **4** Heart of the camera's matchless performance is in its film transport mechanism. This consists of a single claw and tungsten carbide tip for long wear, accurate in registration to better than half a thousandth of an inch at 24 frames per second. Film entering the gate is positively guided on the sprocket side, spring-loaded from the other side. The pressure plate is seven-and-one-half times the length of the aperture, minimizing "film set." The camera features a "spaced-gate" in which the possibilities of film abrasion are minimized. No register pin is required. Because of this movement, the camera accepts films of all manufacture and emulsion without time-consuming adjustments for each type. The pressure plate opens wide for easy cleaning and inspection. **5** The loading door carries the distinguishing feature of the Kodak Reflex Special Camera: the reflex viewing system. It is as accurate as a camera rackover and is, of course, much faster in effecting a setup and focus. It is described in detail on the next page.

**BUILT  
FOR  
PROFESSIONAL  
PRODUCTION**





1



2



4

3



5



The problems encountered in the design of a reflex viewing system for a professional motion picture camera admittedly are complicated. These problems have been solved ingeniously and completely in the Kodak Reflex Special Camera. Images entering the taking lens are alternately exposed to the film by an open segment of the shutter and to the ground glass of the viewer system by a mirror mounted on the back of the shutter segment. There is no light loss at the film, and the scene is constantly viewed through the taking lens by the camera operator.

A ground glass is used for focusing. This insures extreme accuracy in matching the image in the viewer to that reaching the film. The viewing reticule is microscopically adjusted to put it into exactly the same relationship to the viewer as the film plane. Operator errors in adjusting the viewer's optical system cannot effect accuracy of focus. This is of special importance in the very great accuracy required in animation stand work, or in the production of titles.

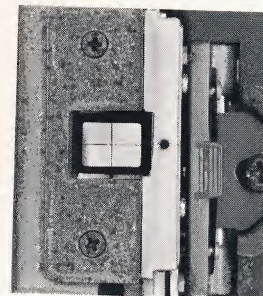
A flip of a lever on the side of the viewer changes the normal  $10\times$  magnification of the finder system to  $20\times$  for focusing. This greater magnification permits extreme accuracy in focusing.

An adjustable eyepiece allows operators to adjust the viewer for their individual eye sight. A soft rubber eyecup excludes stray light from the operator's eyes when focusing or shooting.

Stray light is prevented from entering the camera through the finder eyepiece by a lever which closes off the viewer system while the finder is not in use.

A bracket on the outside of the viewer permits hooking on a director-type finder for producers who prefer to set up a scene this way, allowing the camera operator to focus and view through the lens when the scene is ready to shoot.

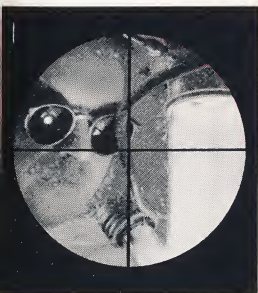
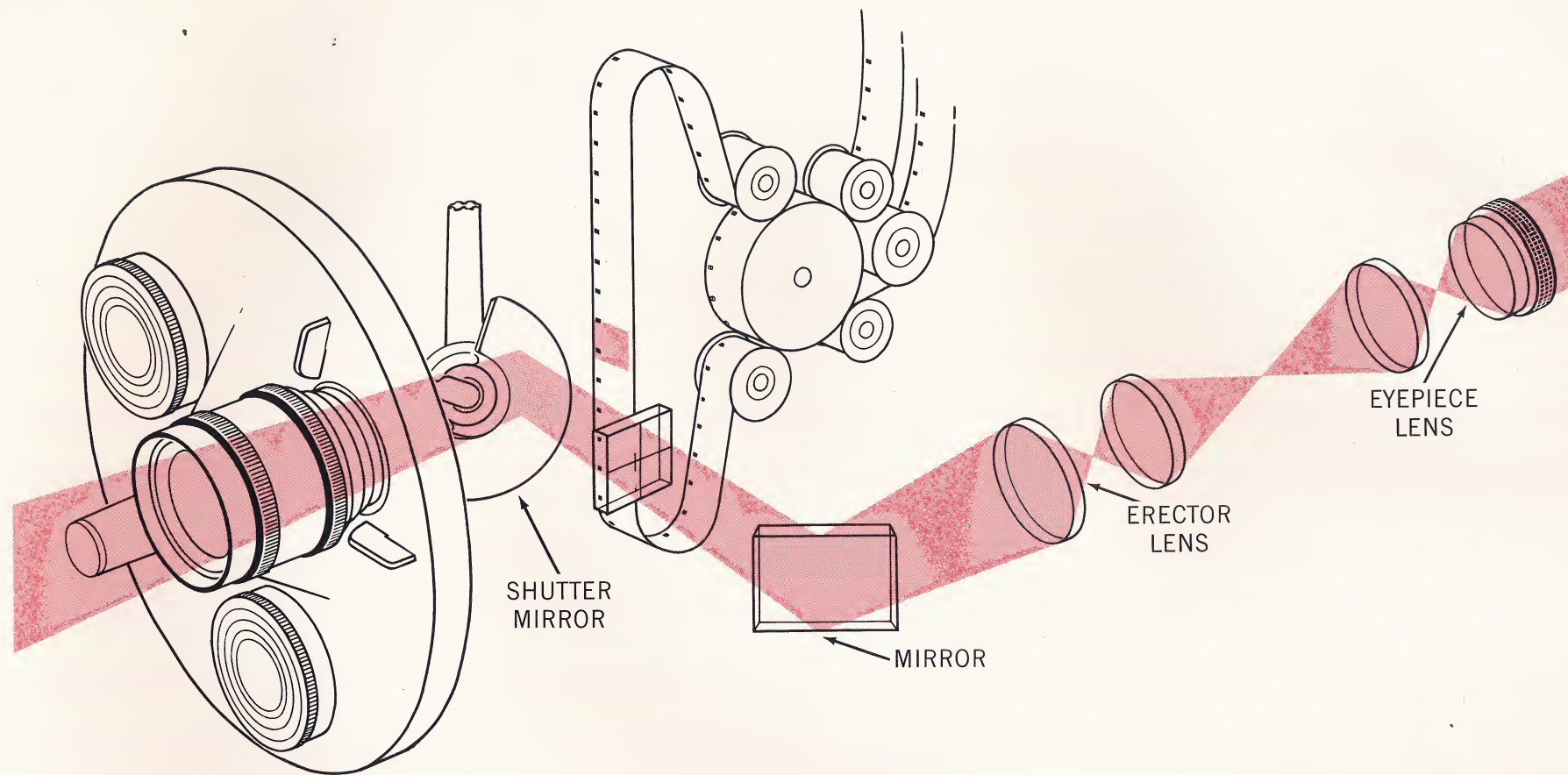
## THE UNIQUE REFLEX VIEWING SYSTEM



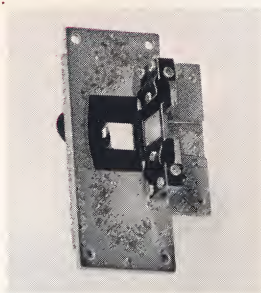
Ground-glass reticule and its cross hairs show exact scene which will reach film when the camera is running.



Scene as it will appear to the camera operator and as it will reach the screen when the film is projected.



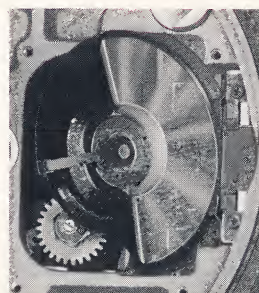
Same scene as it looks at 20× magnification, used for critical focusing — helpful in extreme closeups.



Aperture and reticle can be set in exact relation to mirrored shutter, for identical image at each plane.



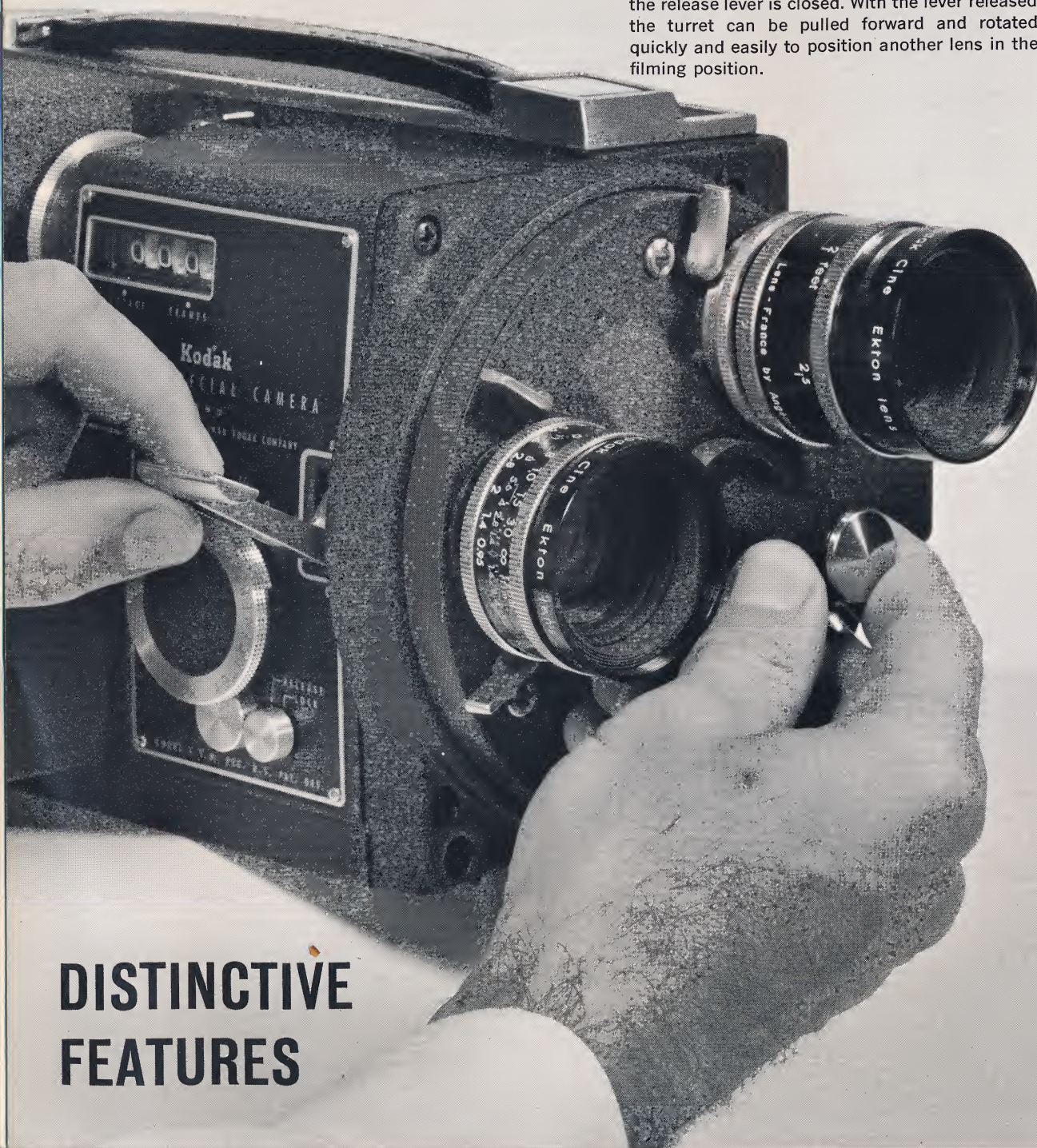
Adjustable eyepiece is locked in position after setting to suit vision of individual camera operator.



Variable shutter can lock at  $\frac{1}{4}$  and  $\frac{1}{2}$  open, fully closed, and fully open ( $170^\circ$ ). Can vary for fades and dissolves.



The three-lens turret is die-cast aluminum, machined to extreme accuracy. It is mounted on spring-loaded ball bearings to a tool-steel shaft. Each lens seat is positioned exactly in front of the film aperture and firmly held in place when the release lever is closed. With the lever released the turret can be pulled forward and rotated quickly and easily to position another lens in the filming position.



## DISTINCTIVE FEATURES



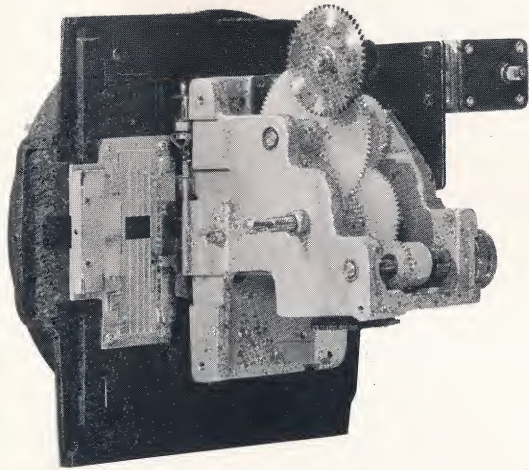
A completely new line of Kodak Cine Ekton lenses has been developed for this camera. They range in focal length from 10mm to 150mm; also available is an excellent new f/2.2 zoom lens with variable focus from 17.5mm to 70mm.

**Type R lens mounts**, exclusive with the Kodak Reflex Special Camera, afford new accuracy, safety and changing speed. Lens clamps wedge the lens tightly into the seat, where it cannot vibrate loose or become unscrewed.



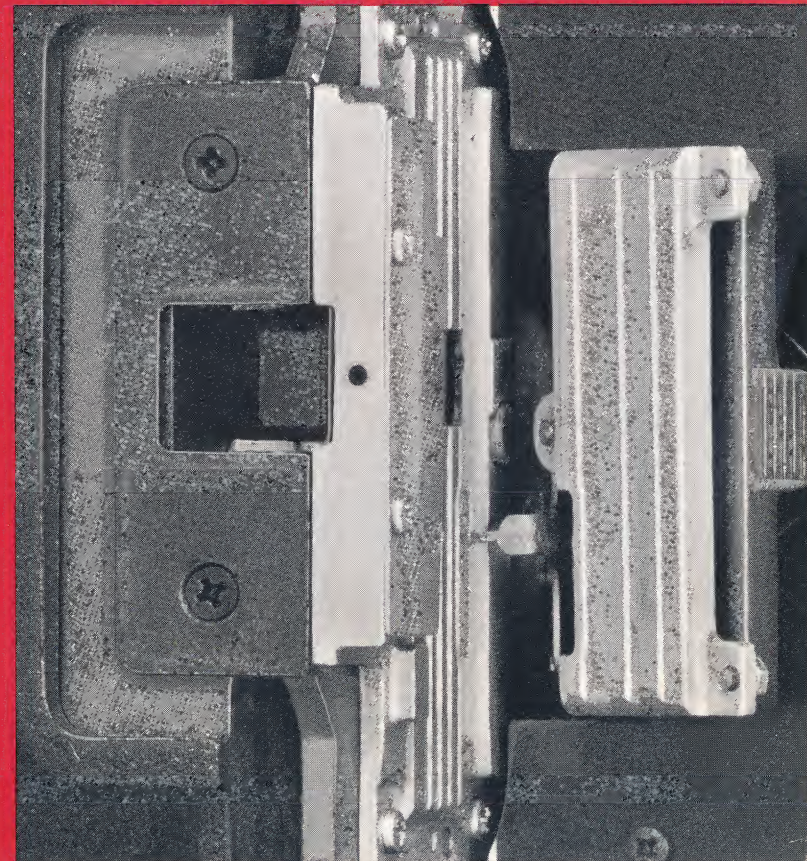
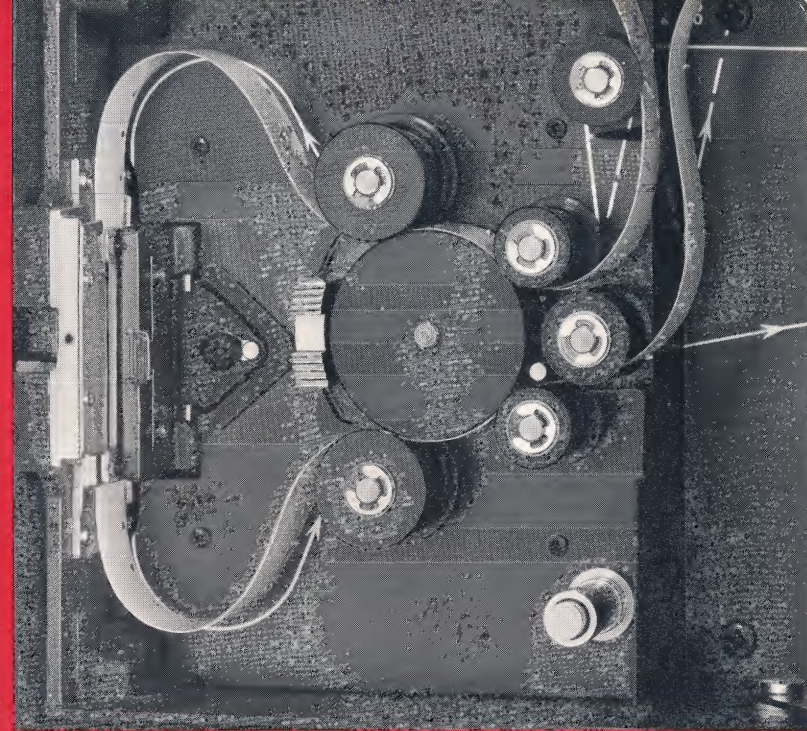


**Threading** is easy and positive. A loop may be drawn from the film magazine and fitted past the sprockets and gate quickly. The pull-down claw movement is opened by the threading knob on the motor drive side of the camera. The buckle switch at the bottom of the chamber may be used as a jog-switch to run film with the camera open, to make certain film is correctly threaded. With the camera door closed the buckle switch will stop the camera automatically if the take-up loop is lost, forcing film against the tripping mechanism.



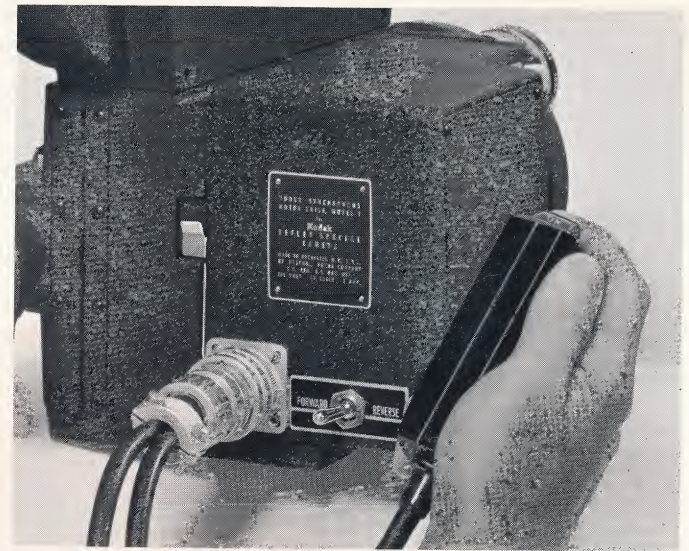
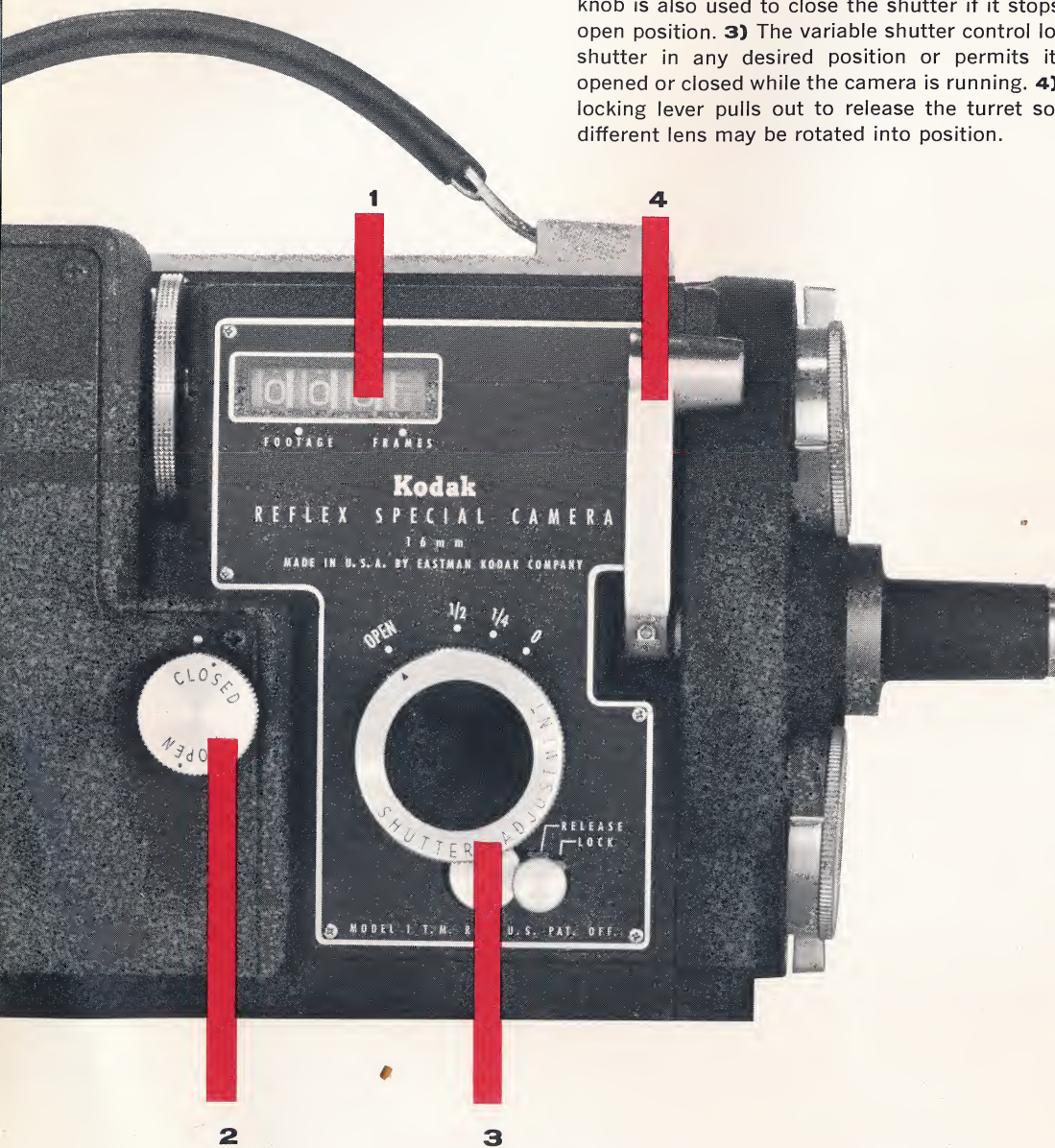
**The gear train** simultaneously drives the shutter, pull-down claw, drive sprocket, footage counter and film magazine. All gears are precision manufactured of long-wearing nylon, are closely fitted and permanently lubricated.

**Film gate,** bearing the pressure plate, opens wide for inspection and cleaning. Dust, foreign matter, or bits of film emulsion, may readily be brushed or blown out of film aperture. The pull-down claw, precisely sprung to prevent any backlash, accepts minute variations in film stocks without sticking or need for adjustment. Its tip is made of tungsten carbide polished to a jewel finish for smooth registration and long life.





**Controls are simple** and are easily operated. **1)** The Veeder counter records both footage and frames in large, easily-read figures. It is quickly reset by the knurled wheel. **2)** The threading knob is marked to show when the pull-down claw and shutter are open. The knob is also used to close the shutter if it stops in the open position. **3)** The variable shutter control locks the shutter in any desired position or permits it to be opened or closed while the camera is running. **4)** Turret locking lever pulls out to release the turret so that a different lens may be rotated into position.

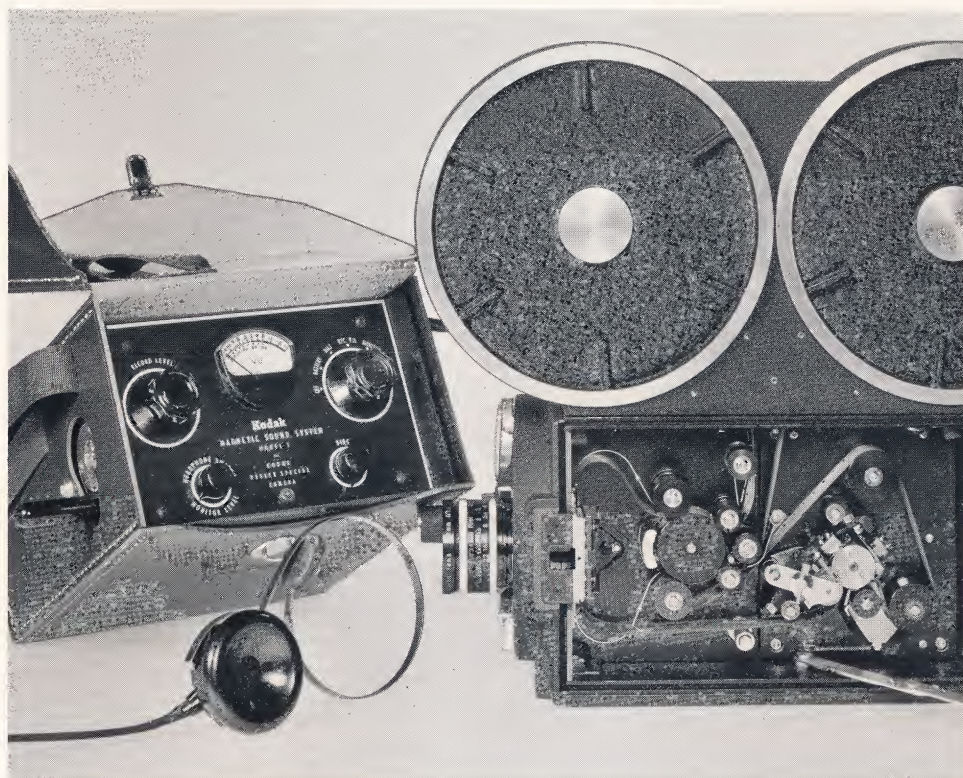


**Operating switch** is on a 10-foot cord which permits starting or stopping the camera without fumbling for a button on the camera body. It can be used by an operator watching the action while the second operator follows focus and movement, using both hands on the camera.

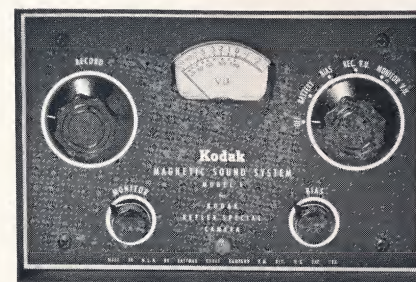
**The basic camera**, without the 400-foot chamber normally used in commercial production, permits use of 100-foot rolls of film where a short retake is needed. It also allows use of special films where extra speed or finer grain or different color characteristics are needed for only a small portion of a production. In low-ceilinged rooms, use of the camera without the chamber on top permits working somewhat higher in tight camera positions.



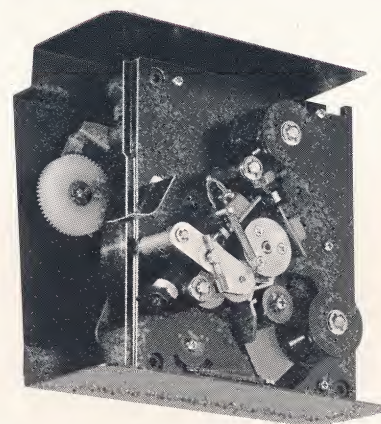




**KODAK Magnetic Sound System, Model 1 (optional)** Ideal for on-the-spot photographing and sound recording, the camera/sound unit provides dependable facility for news-reporting and documentation. All components required for both recording and monitoring are supplied, except battery and microphone. (System accommodates dynamic type microphone up to 3000 ohms impedance.)



**Record / Monitor Amplifier**  
Fully transistorized and housed in lightweight aluminum box, the amplifier is easily portable. Controls allow checking battery voltage, adjustment of bias current and record/monitor levels. Headphones and leather carrying case supplied.



**Film Transport Mechanism**  
Factory-installed for proper alignment, the transport mechanism assures uniform film speed around sound drum. Fits permanently into area normally taken by 100-ft. film supply—which can now be loaded in 400-ft. film chamber.



## FEATURES AND SPECIFICATIONS

Camera supplied with 400' magazine 25mm f/1.4 Cine Ekton Lens, carrying handle, bracket for matte box and director finder, either with or without the synchronous motor drive.

|                      |  |                                     |   |
|----------------------|--|-------------------------------------|---|
| <b>Pull-down</b>     | Unique ball pivot claw   | <b>LENSES</b>                       | <b>ACCESSORIES*</b><br>(available as individual parts)            |
| <b>Gate</b>          | Spaced gate, edge guided   | 10mm f/1.8 - f/16                   | Synchronous motor drive   |
| <b>Viewfinder</b>    | Direct through-the-lens reflex,<br>10X or 20X magnification  | 15mm f/1.3 - f/16                   | 400-foot magazine   |
| <b>Lenses</b>        | 10mm to 150mm (including Zoom)<br>Cine Ekton, Type R mount. Use Series 7<br>attachment directly except 150mm,<br>Series 8 with #81 adapter | 25mm f/0.95 - f/22                  | 1200-foot magazine  |
| <b>Shutter</b>       | Variable — fully closed to 170°  | 25mm f/1.4 - f/22                   | Carrying case   |
| <b>Film Chambers</b> | 400' and 1200'   | 50mm f/1.5 - f/22                   | Magnetic Sound Recording (factory installed)                      |
| <b>Weight</b>        | 24 lbs. with Synchronous Motor,<br>400' magazine and 25 f/1.4 Cine<br>Ekton Lens   | 75mm f/2.5 - f/32                   | Kodak SR lens adapter   |
| <b>Counters</b>      | Footage and frame  | 100mm f/2.5 - f/32                  | Variable Speed Motor  |
|                      |  | 150mm f/2.7 - f/32                  | Time-lapse study motor  |
|                      |  | Zoom 17.5mm to 70mm<br>f/2.2 - f/22 | Blimp   |
|                      |  |                                     | *Consult Eastman Kodak Company for delivery<br>of accessory items |

**EASTMAN KODAK COMPANY** *Motion Picture Film Department*

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